



# PLANT MATERIALS TODAY

A Quarterly Newsletter of the Montana-Wyoming Plant Materials Program

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This is a quarterly field office newsletter to transfer plant materials technology, services, and needs. The plant materials personnel will be featuring short articles on project results, new cultivar releases and establishment techniques, seed collection, and field planting needs, etc. All offices are encouraged to submit articles about plant material-related activities relative to plant performance, adaptation, cultural and management techniques, etc.

## INTERTRIBAL TOUR OF PMC

The PMC staff was honored to host an Intertribal Tour on the afternoon of June 7 and the morning of June 8, 1995. Thirty individuals, representing six Montana American Indian Reservations and the Montana NRCS, met to discuss the potential role of the PMC in solving tribal plant-related problems. The afternoon session included a tour of the greenhouse and tissue culture lab, forage trials, species evaluation plots, National Park Service grass and forb production seedings, and windbreak/shelterbelt test plantings. Tribal elders and NRCS tribal liaisons shared areas of concern in the morning meeting. The group identified nine topics of special interest: culturally significant plants, noxious weeds, water quality, saline soils, forage alternatives, fruit tree diseases, riparian areas, conservation practices, and shelterbelts for wildlife habitat. Tribal liaisons are to assess needs on their respective reservations prior to the development of an NRCS work plan. The meeting concluded with plans to meet again in the fall to share information and to develop a culturally acceptable program on how to proceed.

Susan Winslow

## FARM AID - 1995

The Bridger Plant Materials Center was fortunate enough to have four NRCS employees from Montana and Wyoming detailed to the center this summer. Dick Keller, Soil Conservation Technician at the Torrington, Wyoming Field Office, spent the week of July 17 assisting the PMC staff

with a variety of duties. Dick helped install a replicated bur oak planting, performed irrigation and fertilization duties for both field and greenhouse crops and assisted the staff in establishing asexual propagation trials of Siberian elm, blueleaf honeysuckle and ponderosa pine. For Dick's information, we had excellent success on the elm and honeysuckle but it's still too early to tell on the pine. Dick learned about greenhouse and containerized plant operations, the various tree improvement studies at the center for windbreak and shelterbelt applications and spent time reviewing research on grasses.

The week of July 24 we had three additional details at Bridger including Ben Swenson, Civil Engineering Technician at the Pinedale, Wyoming Field Office, Billijo Doll, Soil Conservationist at the Chinook, Montana Field Office and Eva Zelenak, Soil Scientist at the Big Timber, Montana Soil Survey Office. The group performed numerous helpful tasks while learning about center operations first hand. On Tuesday morning the employees participated in a tour of the center with a group of Hysham vo-ag students on a trip sponsored by the Treasure County Conservation District. That afternoon the group began harvesting forage samples from an Inner Mongolia inter-center strain trial. The group finished taking samples the next day and then participated in an evaluation of an Outer Mongolia seed increase study. Thursday was spent seeding containers in the greenhouse for use in revegetating disturbed areas resulting from highway reconstruction projects in Glacier National Park.

The staff of the Bridger Plant Materials center extends our many thanks to these four individuals for taking the time from their busy schedules to learn more about plant materials and assist us in our summer duties.

Joe Scianna

## FACILITY IMPROVEMENTS

In March, the Plant Materials Center Board of Managers constructed a 30 foot by 50 foot addition to the seed barn at the PMC. This addition will be used to store seed.

In July, the Board of Managers contracted with an electrical contractor to upgrade the electrical system at the PMC. We got a new service panel, replaced the remaining overhead power lines with buried lines, rewired the well, and did various wiring projects in the shop, greenhouse, lab and hoop house. It's going to be real nice not to be tripping breakers.

John Scheetz

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## **Development of Acid/Heavy Metal Tolerant Cultivars (DATC)**

### **Project Update**

This summer has been very busy and full of accomplishments for the DATC project. In April two research plots were established for the project. The first research plot was established on the Anaconda Superfund site. It was seeded with 89 different species in three replications from various sources including: the Bridger PMC, the Intermountain Forest and Range Experiment Station, Pullman PMC, Corvallis PMC, Upper Colorado Environmental Plant Center, Corning PMC, Bismarck PMC, and collections from the Anaconda Superfund site. The second research plot was established on the East Helena Superfund site. It was set up the same as the Anaconda site except with the addition of 10 more species being tested at this site.

It is premature to draw any conclusions from the monitoring data of the first growing season on these two sites. However, keeping the previous statement in mind, there seems to be approximately a dozen species doing well on the Anaconda site and about twenty species doing well on the East Helena site. Out of all the species planted on both sites, the species collected from the Anaconda Superfund site were doing the best. Next years monitoring data will be much more meaningful and valuable.

Starting in August, numerous seed collection trips were made throughout the state of Montana. Most of the sites were abandoned minelands or lands where mine ore was processed such as the Anaconda Superfund site. The last collections were made on October 5th. A total of 81 collections were made consisting of a wide variety of grasses, shrubs, and trees.

A second research plot is scheduled to be planted this month at the Anaconda Superfund site. It differs from the first plot in that it is constructed on one of the tailings ponds. It was amended with three different rates (60 T/Ac, 30 T/Ac, and 0 T/Ac) of CaO lime (quick lime) in May. The pH of the site was raised significantly (up to a pH of 11.75), but over the past four months has decreased enough to

allow planting ( $\text{pH} < 8$ ). The species planted at this site will be the same as those at the previous two sites with the addition of approximately 20 species collected this summer from the minesites of Montana.

The project will actively continue through the fall and winter months with numerous cuttings taken this summer. These cuttings are doing quite well in the greenhouse. Further propagation of these cuttings, other hardwood species from seed, and more cuttings to be taken this winter will make the winter growing months in the greenhouse very valuable.

Project Manager  
Matthew L. Marsh

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## **TIME TO THINK ABOUT 1996 FIELD PLANTINGS**

Fall is a good time to look for field planting opportunities when planning with farmers and ranchers. We currently have seed to test the following four new plants: (1)'Goldar' bluebunch wheatgrass--has better seedling vigor and production than 'Secar' or 'Whitmar'; (2)'Rush' intermediate wheatgrass--has forage production equal to other intermediates, but has the drought tolerance of pubescent wheatgrass;(3)'NewHy' hybrid wheatgrass--a quackgrass X bluebunch hybrid with salt tolerance similar to tall wheatgrass, but easier to manage and adapted to wet-saline sites; and (4)'Bannock' thickspike wheatgrass--adapted to dryland sites and having better forage yields than 'Critana'.

Long-range plans and planting guides were sent to the field in the 1993 fall. They describe the plant, its selection attributes and outline the culture and management practices for its successful use. For your reference, these plans are filed in the appendix of the National Plant Materials Manual.

Look for cooperators that are interested in trying something new and who will provide the site preparation and management required for a "fair test". Prepare a field planting request (SCS-ECS-009 for Montana and WY-ECS-50-E for Wyoming) and submit it to Larry Holzworth by February 1, 1996, for state plant materials committee review and recommendation.

Field plantings provide plant performance and adaptation information in the "real world" and adds worthy cultivars to our technical guide. Thanks for your interest, help and support of your plant materials program!

Larry Holzworth

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